

VERMONT STATE AUDITOR'S REVIEW OF THE WEATHERIZATION ASSISTANCE PROGRAM

JANUARY 26, 1998

Purpose, Scope & Methodology

Pursuant to Act #182 of the 1996 Legislative session, the State Auditor's office has conducted a financial and performance review of the Weatherization Assistance Program (WAP). The intent of the Legislature was to "identify whether the program has achieved its stated benchmarks" and to "focus on performance measures for effectiveness and efficiency."

The scope of the review included compliance and internal controls, and an evaluation of the program's goals, benchmarks, performance, and performance measurement reporting. The methodology consisted of interviews with key staff and a review of relevant statutes, regulations, and administrative rules. Furthermore, we reviewed five previous independent performance evaluations including the most recent which was completed while this review was underway.

Background

"The current Weatherization Assistance Program has its roots in the federal legislation [that created] the Community Services Administration (CSA) which was part of President Johnson's 'War on Poverty.' The CSA spawned a series of locally-based Community Action Agencies (CAA) devoted to assisting low-income families meet their immediate needs. A few New England states, Vermont among them, took advantage of this resource to provide 'winterization' services which were intended to reduce household energy expenses. These locally initiated programs grew to become the national Weatherization Assistance Program which has been administered by the federal Department of Energy (DOE) since 1979. From modest origins, the WAP has advanced to become a sophisticated component of national energy policy, utilizing the most recent technology and techniques in diagnosing energy-related problems and providing remedies for them.

"The Vermont WAP is part of a national network sponsored by DOE which provides grants to each state 'to reduce the impact of higher fuel costs on low-income families' (10 CFR Part 440). The program is specifically intended by Congress 'to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential energy expenditures, and improve their health and safety, especially low-income persons who are particularly vulnerable such as the elderly, the handicapped and children' [42 U.S.C. 6861(c)].

"The Vermont WAP is administered by the Office of Economic Opportunity [OEO]. In 1990, Act 272 was passed by the Vermont General Assembly to augment diminishing federal [support] with a Weatherization Trust Fund financed by a 0.5% gross receipts tax on heating fuels. The Act [was] intended to stabilize the funding for the [program] which, in the recent past, received Petroleum Violation Escrow (PVE) funds to compensate for significantly reduced federal funding. The pool of PVE funds was quickly exhausted, however, and the Trust Fund was established to provide a mechanism to support continued operation of this program which is not external to Vermont. The Fund also enables the program to address local client needs in ways which go beyond the restrictions of the DOE program, a program intended to be national in scope and, therefore, not always sufficiently flexible to adequately respond to Vermont's needs.

"The work is performed through a network of five service providers, covering all areas of the state, with a total of 12 field offices. After an applicant has been verified as eligible, an energy auditor conducts a diagnostic investigation, with the assistance of testing equipment, of the applicant's home, to identify the causes of excessive energy consumption and any health or safety hazards. A cost-effectiveness analysis is performed to assist in determining which remedial measures are the most appropriate"⁽¹⁾and, following completion of the work, a quality control inspection is conducted to ensure that all installed measures are appropriate and functioning properly.

"The 1990 Census estimated there were 38,775 homes with income eligible residents in Vermont in 1989. [But] ascertaining the number of eligible homes [now] is difficult because low-income residents move, and because economic and demographic conditions change."⁽²⁾ Since inception, the program has weatherized over 23,000 housing units in Vermont,⁽³⁾ including 1,227 during the 1995-96 program year. At present, there are over 3,000 households on the waiting list and they can expect to wait on average about seven months to participate in the program.⁽⁴⁾

I. Program Goals and Performance: The following goals and benchmarks were enumerated in the Weatherization Assistance Program's 1997 Annual Report.

A. Average space heating percentage savings: This indicator refers to the average percentage change in fuel consumption for all units in the sample as a result of weatherization efforts. It is determined by measuring fuel consumption before and after program participation after adjusting for differences in temperature (heating degree days).

Note on the sample: The review period covered almost two years (8/94 - 4/96). Of the 2,088 units in the WAP files, only 235 had usable pre- and post-program energy records. Of those, only 82 that met the reliability criteria for the evaluation software.

Goal: Increase average space heating percentage savings above the 1993-94 level of 20.1%.

FINDING

The program achieved its goal and recent evaluations show consistent improvement.

History of Space Heating Percentage Savings

Evaluation Period	Avg. Savings
November 1990 - December 1991	15.0% ⁽⁵⁾
April 1992 - March 1993	18.3% ⁽⁶⁾
April 1993 - March 1994	20.1% ⁽⁷⁾
August 1994 - April 1996	22.4% ⁽⁸⁾

RECOMMENDATION

None.

B. Average space heating MMBTU savings: This indicator also refers to average space heating savings but uses an absolute unit of measure rather than a percentage change. In order to compare consumption of different fuel types, a standard unit is used (millions of British Thermal Units or MMBTU's) that reflects the energy content of each fuel.

Goal: Raise average space heating MMBTU savings above the 1993-94 value of 24.5.

FINDING

The program achieved its goal and recent evaluations show consistent improvement.

History of MMBTU Savings

Evaluation Period	Avg. Savings
November 1990 - December 1991	17.6 MMBTU ⁽⁹⁾
April 1992 - March 1993	18.5 MMBTU ⁽¹⁹⁾
April 1993 - March 1994	24.5 MMBTU ⁽¹¹⁾
August 1994 - April 1996	32.4 MMBTU ⁽¹²⁾

RECOMMENDATION

None.

C. Program Benefit-to-Cost ratio: This indicator compares the total cost of all efficiency measures with the estimated Net Present Value of energy-related benefits for the entire program. The benefits are determined by projecting the annual savings in fuel costs over the expected life of the measure and adjusting for the "time value" of money.

Goal: Raise program benefit-to-cost (B-t-C) ratio above the 1993-94 level of 1.8 to 1.

FINDING

The program achieved its goal and maintained the strong ratio achieved previously.

History of Benefit-to-Cost Ratios

Evaluation Period	B-t-C Ratio	With. Externalities ⁽¹³⁾
April 1992 - January 1993	1.33 ⁽¹⁴⁾	1.68
February 1993 - September 1994	1.80 ⁽¹⁵⁾	2.10
August 1994 - April 1996	1.82 ⁽¹⁶⁾	NA ⁽¹⁷⁾

The method used to estimate the B-t-C ratio has been modified recently. In prior evaluations, fuel consumption figures for all homes in the sample were averaged regardless of fuel type. The current evaluation used a weighting factor to more accurately reflect savings based on the distribution of fuel type used throughout the population. As a result, the most recent figure (1.78) is slightly lower than 1993 - 94 but cannot fairly be compared with prior years. The figure reported above (1.82) used the prior methodology and is comparable to previous years.

The B-t-C ratios reported represent only direct energy-related economic benefits and do not include non-energy benefits such as air quality improvements, and increases in property values and building longevity. If these additional benefits were included, the B-t-C ratios would increase as shown in column 3 of the table above.

Furthermore, the ratio does not include estimates of program-related health and safety benefits, which is one of the primary goals of the federal program. Such benefits are difficult to quantify but evaluation methods are under investigation. Examples of health and safety-related problems addressed by the WAP include, among others, bad wiring and improper ventilation of combustion gases. The WAP is investigating methods of estimating health and safety benefits (see Item F below).

While the B-t-C ratio may measure savings, it is in some ways an imperfect indicator. It does not for instance reflect the legislative mandate to serve certain demographic groups, which can conflict with the goal of achieving the greatest possible savings. By law, the program must serve the elderly, disabled and families with children, in addition to the general low-income population. But entry onto the waiting list and into the program is based on the time of application (i.e., first come first served). The magnitude of potential energy savings, however, is related to the age and condition of the housing stock and the level of consumption.

If the program's goal was only to maximize energy savings, staff would prioritize the homes with the highest consumption (and the greatest opportunity for savings) regardless

of the other considerations. While this would produce the largest possible B-t-C ratio, it might not satisfy other legitimate goals such as basic fairness and attention to special needs (i.e., elderly, etc.). In order to ascertain in advance whether efficiency measures are likely to be cost-effective, the WAP staff utilize a "target investment protocol" based on an estimate of the BTU's per Square Foot per Heating Degree Days. In any case, the reported B-t-C ratio for any given period is affected by the need to balance the competing goals of the program.

RECOMMENDATION

We recommend that future evaluations expand the B-t-C ratio methodology to include estimates of non-energy benefits (including health and safety - see Item F below).

D. Average Net Present Value savings: This indicator measures the projected annual savings in fuel costs over the expected life of the measure and adjusts for the "time value" of money.

Goal: Increase average Net Present Value (NPV) savings above the 1993-94 value of \$4,232.

FINDING

The program achieved its goal and recent evaluations show consistent improvement.

History of Average NPV Savings

Evaluation Period	Avg. NPV Savings
April 1992 - January 1993	\$3,101 ⁽¹⁸⁾
February 1993 - September 1994	\$4,232 ⁽¹⁹⁾
August 1994 - April 1996	\$4,315 ⁽²⁰⁾

RECOMMENDATION

None.

E. Kilowatt-hour savings: This indicator is intended to measure non-space heating electric energy savings. Such indirect savings might include reduced usage (if not elimination) of heat tape used to protect water pipes exposed to sub-freezing temperatures "by reducing excessive air leakage, particularly in basements, cellars, and crawl spaces."⁽²¹⁾ Moreover, additional KWH savings "can ensue as a result of reduced operation of burner, circulation, and furnace fan motors due to heating load reductions and heating system efficiency improvements, as well as from reduced need to operate humidifiers and dehumidifiers."⁽²²⁾

Goal: Incorporate kilowatt hour (KWH) savings into the next program impact evaluation.

FINDING

The WAP has estimated post-weatherization KWH savings from non-space heating uses and found a 3% reduction in electric energy consumption.

At this time, however, the methodology is limited and cannot account for non-weather related changes in households (e.g., number of household members, electric appliances, etc.).

RECOMMENDATION

We recommend that the WAP continue the effort to accurately estimate indirect KWH savings in non-electrically heated homes.

F. Health and safety benefit-to-cost ratio: This indicator would apply the B-t-C ratio methodology described above in Item C to health and safety measures.

Goal: Develop methodology to quantify the program's health & safety benefit-to-cost ratio.

FINDING

The WAP recently received a report which identifies potential non-energy benefits and suggests possible indicators for further elaboration.⁽²³⁾

As part of the current evaluation, the consultant was asked to provide the necessary methodology. Due to budget constraints, however, full scope of work was not completed. Apparently, the main evaluation took somewhat longer than had been expected and less money was available for a thorough examination of the health and safety component.

Note on evaluation budgets: According to WAP staff, the current evaluation was budgeted at less than \$15,000 which is considerably less than earlier evaluations. The first evaluation cost almost \$60,000 because the WAP had not yet developed the in-house data management system (WDMS). The improved ability to collect and report data on unit costs, fuel consumption, and expenditures has greatly reduced the cost of program evaluations over time.

The effort to quantify non-energy impacts is expected to be time-consuming and resource intensive. The consultant's report will help the WAP staff prioritize which specific indicators are likely to have reliable data sources and present the best opportunities for quantification. According to WAP staff,⁽²⁴⁾ they plan to tackle two or three in each of the next few years. Some of the non-energy impacts include:⁽²⁵⁾

- reduced costs of repairs and troubleshooting for old or poorly maintained furnaces

- reduced occupant fire loss resulting from the use of old or poorly maintained furnaces
- less likelihood of customer arrearages and subsequent savings to utilities on collection efforts due to availability of additional disposable income from program-related savings
- fewer shutoffs, reconnects, and service terminations
- improved value of housing stock due to program-related investments
- community economic benefits due to availability of additional disposable income from program-related savings
- reduced household damage from frozen pipes, cracked walls or structural joint problems

RECOMMENDATION

We recommend the WAP continue its effort to quantify non-energy impacts.

G. Leveraging outside funds: Like other state programs with unmet needs and uncertain funding, the WAP attempts to secure additional resources from non-governmental sources.

Goal: Increase amount of funds leveraged from outside sources for weatherization.

FINDING

The program achieved its goal by obtaining \$160,923 in Program Year 97, which is a 78% increase from the previous year (\$90,376).

According to WAP staff,⁽²⁶⁾ leveraged funds included "direct cash contributions from rental property owners, labor and materials furnished by rental owners for work required prior to weatherization, self-help labor by weatherization clients and labor by Vermont Associates and Job Training Partnership Act participants." The 1996-97 total also includes funds from the Lindsay Foundation Trust, which is overseen by Southeastern Vermont Community Action (SEVCA), and which are specifically earmarked for rehabilitation and health and safety work beyond the scope of weatherization.

RECOMMENDATION

None.

Links with the Department of Social Welfare's (DSW) Fuel Assistance Program: The Fuel Assistance program is operated by DSW and provides seasonal and crisis fuel assistance, as well as emergency heating system replacement. The program is funded primarily by an annual federal LIHEAP grant and serves over 12,000 Vermonters. In recent years, LIHEAP funding has been cut dramatically, 30% since 1994 and over 50% over the last decade. It is also noteworthy that as a result of cuts in LIHEAP support, the Legislature in 1996 changed eligibility requirements and many Vermonters who had

received fuel assistance in the past became ineligible to do so. Last year (1996-1997) there were 3,700 Vermonters who sought fuel assistance but were deemed ineligible, while another 2,700 Vermonters sought crisis fuel assistance from local community action agencies.⁽²⁷⁾ Although it is impossible to tell precisely, many of these 6,400 Vermonters are likely candidates for WAP services. There are obvious reasons, therefore, for good coordination between the two programs.

In the past, the Fuel Assistance and Weatherization programs were not well coordinated. The two programs represent different but complimentary approaches to the same problem. However, while the need for fuel assistance cannot be eliminated by weatherization (since poverty is the cause), it is clear that reducing energy demand through weatherization is a more cost-effective investment of public funds than repeated cash payments for fuel. Over the past two years, the two programs have taken steps to better coordinate their efforts.

Goal: Streamline links with DSW's Fuel Assistance Program

FINDING

Overall, it appears coordination of the two programs has improved considerably and a commitment exists to address the remaining issues.

Previously, there was no systematic effort to integrate the two programs. Since weatherization reduces the demand for fuel and saves money for participating families, anyone receiving fuel assistance should be considered for weatherization and informed about other public and private energy efficiency programs.

In order to improve coordination between the two programs, "all clients receiving supplemental and emergency fuel assistance are referred to the weatherization program."⁽²⁸⁾ At present, referrals are handled manually but "the intent is to [integrate the] data base systems to automate the referral process, allow prioritization of high users and repeat emergencies and to help generate statistics on the effect weatherization has on fuel assistance."⁽²⁹⁾ Manual examination and sorting by WAP staff is extremely inefficient since the Fuel Assistance client list contains over 12,000 names.

According to Richard Moffi, Director of the Fuel Assistance program,⁽³⁰⁾ the effort to integrate the databases is a high priority but has been delayed by other, more immediate, challenges. For example, recent changes in program administration, such as switching the method of payment from recipients to fuel dealers, and altering the application schedule, have required considerable staff resources. Having accomplished the other tasks, efforts to improve links with the WAP will proceed as quickly as resources permit.

Another administrative change planned for next year should have additional benefits. As part of the intake process, the Fuel Assistance program intends to collect fuel consumption data from applicants. When this information is shared with the WAP, it will

improve their ability to identify and target large users who have the greatest potential for efficiency-related savings.

According to Jules Junker, Weatherization Programs Coordinator⁽³¹⁾ progress has also been made in the operation of the Emergency Heating System Replacement Program funded by DSW. Specifically, "on-site inspection to determine if an emergency existed or to diagnose the extent of the heating system problem,"⁽³²⁾ which had been performed by outside heating system technicians, is now handled by trained weatherization energy auditors from the WAP subgrantees. In addition to inspection and diagnosis, the WAP crews also conduct a quality control check of every job.

RECOMMENDATION

We recommend that the two programs continue their efforts with particular attention to the integration of the two databases.

Summary

The Weatherization Assistance Program has commissioned no less than five evaluations by four different contractors since its inception in 1980. The first evaluation in 1985 used a "pay back analysis" to estimate the time required for the projected savings to pay for the cost of materials and labor used to install efficiency measures. The report stated that "relative to the long life associated with most buildings it appears that this program is most effective."⁽³³⁾ Unfortunately, the study was flawed in several respects as described in some detail in a subsequent evaluation.⁽³⁴⁾ Nevertheless, the limitations of the first effort helped the WAP appreciate the need for better data.

At the direction of the Legislature, the Department of Public Service contracted for an evaluation of the WAP's administrative and operating practices, and a "design evaluation scheme" in 1989. The 1990 reports by Synertech contained detailed recommendations for improving evaluation efforts including the "establishing a system for ongoing program evaluation emphasizing measured indicators of fuel savings. This system should feed data into a management information system that would become both a guide for management decisions and a basis for annual reports to the legislature containing estimates of program cost-effectiveness"⁽³⁵⁾

Following the Synertech reports, the UVM Center for Rural Studies (CRS) was hired to perform a program evaluation in 1991.⁽³⁶⁾ In addition to estimating program cost-effectiveness, the CRS report echoed the Synertech recommendations and, since that time, the WAP has undergone three more program evaluations and has adopted a regular schedule for such reviews. Furthermore, the WAP created the Weatherization Data Management System (WDMS) to make data collection and analysis easier and more uniform. Moreover, this new in-house capability has dramatically reduced the scope of work for outside consultants who conduct periodic evaluations for the WAP and, as a result, has saved tens of thousands of dollars in contract costs.

Subsequent evaluations of the program by VEIC and TecMRKT have used more sophisticated methods to quantify both energy and economic impacts and found increasing levels of savings over time (see Tables above). Furthermore, some consultants have attempted to quantify indirect impacts to better understand the total societal benefits of the program.

As noted above, work remains to be done in a few areas including developing methodology to quantify the program's health and safety benefits. In addition, there is a continuing problem with the quality of data about fuel use for

many homes due to the lack of consistent or uniform reports from some fuel dealers.⁽³⁷⁾ As a result, sample sizes for evaluations are often relatively small.

In light of the program's goals, it seems appropriate to estimate the health and safety, environmental and housing-related impacts of the program in order to fully understand total societal benefits. Notwithstanding these remaining challenges and limitations, however, the WAP continues to make good progress in its effort to accurately evaluate the effectiveness of the program.

II. (307)(c) Performance Measurement (PM) Reporting

In 1994 the Legislature amended 32 VSA (307 to include subsection (c) which requires the inclusion of a strategic plan in all departmental budgets. Among other things, the plan must include a report on the performance of each department including "a description of indicators used to measure output and outcome." The primary purpose of the performance report is to inform and support the Legislature's budget decisions.

The Auditor's most recent report on state compliance with (307)(c) included a review of OEO's Fiscal year 1997 submission which was rated as "poor."⁽³⁸⁾ Problems and deficiencies included an overly broad and hard to quantify mission, limited data for listed outcome measures and, with the exception of the WAP, no useful productivity or efficiency measures or data.⁽³⁹⁾ A review of OEO's Fiscal year 1998 and draft Fiscal year 1999 performance management (PM) reports shows no significant improvement.

Although the focus of this review is the WAP, their PM report is contained within OEO's budget submission. Therefore, we will review and comment on OEO's PM reports with a particular emphasis on the WAP wherever possible.

A. Mission: A mission statement is the foundation of PM and should lend itself to quantification.

FINDING

OEO's mission statement is too broad and does not easily lend itself to quantification.

The draft Fiscal year 1999 PM report states that the primary mission is to "increase the self-sufficiency of Vermonters and strengthen Vermont communities."⁽⁴⁰⁾ Increasing self-sufficiency can be measured but strengthening communities is probably too vague for quantification. The subsequent paragraph describes OEO's activities and states that its goal is to eliminate poverty.

OEO's Fiscal year 1998 PM report used somewhat different language that may be more appropriate: "OEO works with the private sector and other groups outside government to eliminate the causes and symptoms of poverty (emphasis added), and to coordinate these efforts with state and community based groups."⁽⁴¹⁾

RECOMMENDATION

We recommend that OEO clearly differentiate between departmental activities and the overall mission which should be clear and, ultimately, reducible to quantifiable measures.

B. Market:

FINDING

The WAP portion of the market section refers to the number of family's served but not the number in need.

The PM report states that the WAP is limited by budget constraints and can only serve 1,100 to 1,200 families annually, although there is a 1 to 2 year waiting list of eligible Vermonters. This is a significant fact and, in light of the estimated cost-effectiveness of the program, should be of interest to the legislature. Publicly funded programs that have net positive economic and societal benefits are, by definition, good investments. Moreover, the savings achieved allow elderly and other low-income Vermonters to become more self-sufficient which reduces the demand for other public assistance programs, particularly fuel assistance..

RECOMMENDATION

We recommend that the WAP attempt to quantify the number of eligible Vermonters forced to wait for weatherization and an estimate of the cost of significant delays in meeting the need.

C. Inputs: The Governmental Accounting Standards Board has developed a "framework that is used by GASB in considering standards for reporting performance measures by state and local governments."⁽⁴²⁾ Among other things, it recommends the use of "unit costs." A key component of unit cost is inputs, defined as the resources expended by a department.

FINDING

Although contained elsewhere in the budget, OEO (like most other departments) did not include a concise description of total inputs in their PM report.

RECOMMENDATION

We recommend that OEO / WAP report total inputs and prepare unit cost estimates.

D. Outcomes:

FINDINGS

1. Although the WAP provided several useful outcome measures, the measures did not include any comparative data and were not presented clearly.

The WAP has a number of useful outcome measures (see Section I above) although they were not presented clearly in the Fiscal year 1998 PM report (located mistakenly in Section 4 "How Will These Outcomes Be Achieved" rather than in the outcome section). More importantly, the most effective method of reporting outcomes (e.g., avg. space heating savings) is not in text format (as was the case here), but in tables, charts, or other graphics. As presented, the information is not accessible to most busy readers (i.e., legislators). Furthermore, it is helpful (and recommended by GASB) to include comparative data from previous years, to generally accepted standards and, if possible, from other jurisdictions.

2. Some important outcomes were not quantified because some of the indirect impacts of OEO's efforts may be measured elsewhere within DSW.

For example, as discussed above, weatherization may increase a family's self-sufficiency which may contribute to reduced caseload for other DSW programs. This situation is not unique to OEO (or DSW) and is not insurmountable. Although difficult, a cross-departmental team could attempt to develop a methodology to collect and report information that would help describe the synergy between programs. Such information could be very valuable to planners and the Legislature as they develop strategies to address complex and inter-related human service problems.

3. The WAP failed to report any information about participant satisfaction.

A critical outcome measure for all government services is public perception. The WAP routinely solicits information from participants about the work performed, the conduct of staff and crewmembers, and the effectiveness of the measures installed. This information is essential for program managers and helps others better understand and evaluate the program. OEO/WAP, like most other state departments, does not presently provide such information in their PM report, although it is often featured in annual reports.

RECOMMENDATIONS

1. We recommend that the WAP report on outcome measures include comparative data from previous years, to generally accepted standards and, if available, from other jurisdictions. The data should be presented in tabular or graphic form to improve its accessibility.

2. We recommend that OEO/WAP work with other departments to develop methodology to measure cross-departmental impacts.

3. We recommend that the WAP present the results of their periodic surveys of program participants in the annual PM report.

E. Outputs: Unlike outcomes, which measure accomplishments or results of program activities, outputs measure the quantity of services provided. Such information is another element of the calculation needed to determine unit cost (i.e., inputs divided by outputs).

FINDING

Like many other departments, the WAP has not presented useful output measures.

The measures provided actually refer to: a) inputs (funds leveraged from outside sources); b) cost-outcome (benefit-to-cost ratio); and c) internal evaluative procedures (status of implementation of methodology for quantifying health and safety benefits). Although useful measures, they fail to address the key element of outputs which is productivity - that is, how much of the goods or services did the entity produce or provide to its clients. For the WAP, such measures might include the number of energy audits performed, the number and type of installations completed, and the number of special needs clients served. This information is readily available and is typically reported in the WAP's Annual Report to the legislature.

RECOMMENDATION

We recommend that OEO/WAP replace the output measures provided with more appropriate measures such as those described above and, as with outcomes, report comparative data whenever possible.

F. Efficiency: The preferred measures are unit cost, which relates efforts (resources used) to outputs (quantity), and cost-outcome which measures the cost per unit of outcome or result.

FINDING

OEO/WAP reported a critical cost-outcome measure (benefit-to-cost ratio) that contains the unit cost within it.

RECOMMENDATION

We recommend that OEO/WAP report unit costs and estimated benefits separately in order to help the reader understand the meaning and value of the benefit-to-cost ratio.

Summary

We find the OEO could improve its PM reporting in the areas noted above. The WAP sections contain some useful information that, along with comparative data, could be presented more effectively. It is noteworthy that the WAP has an very good record of evaluating program impacts but has not yet mastered the performance measurement reporting requirements. The former is the more difficult of the two and provides virtually all the information necessary for the latter. Therefore, improving PM reporting should not be particularly difficult or time-consuming.

III. Financial Review

A. Compliance and Internal Controls: In accordance with Generally Accepted Government Auditing Standards (GAGAS) guidelines the State Auditor's office has relied upon several recent audits and reviews rather than undertake separate reviews for this report.

FINDING

The WAP appears to be in compliance with all relevant federal and state requirements and effective internal controls are in place.

We relied upon the following documents:

1. Department of Energy Annual Grantee Monitoring Review: The most recent review of the program by DOE found that "Vermont's OEO continues to manage the [WAP] with skill, producing homes with reduced heating bills and greater safety for low-income Vermonters."⁽⁴³⁾ Furthermore, the Annual On-Site Administrative and Technical Monitoring Review of OEOÆs Subgrantee Reviews found that "the subgrantee administrative monitoring review was skillfully handled [by OEO staff] and they provided the subgrantee with technical assistance as needed."⁽⁴⁴⁾
2. 1996 Federal Single Audit: As part of the 1996 Federal Single Audit, KPMG Peat Marwick reviewed OEO compliance and internal controls in relation to LIHEAP funds used for weatherization. Based on sample test work, KPMG concluded that "the Agency appears to be in compliance" and that "there appears to be controls in place, and they appear to be operating effectively."⁽⁴⁶⁾
3. State AuditorÆs Audit of General Purpose Financial Statements: Information related to the WAP's financial transactions is part of the state's Financial Management Information System (FMIS). FMIS is audited annually by the State AuditorÆs office and, for Fiscal year 1997, internal controls for FMIS have been determined to be appropriate

and adequate. Furthermore, the Fiscal year 1996 audit of OEO found that the department "has complied with the statutes in processing utility rebates"⁽⁴⁷⁾ and that "our evaluation of [and overall conclusion about] the internal controls in place over expenditure transactions is that the controls are strong."⁽⁴⁸⁾

4. Sample Subgrantee Programmatic and Administrative Monitoring Report by OEO: The most recent in-house monitoring review of the Bennington and Rutland offices of the Bennington - Rutland Opportunity Council (BROC) were detailed, thorough, and included technical assistance and recommendations for improvement where warranted.⁽⁴⁹⁾

5. Independent Audits of Subgrantees: The subgrantees are required by OEO to have annual independent audits performed. We reviewed three audits and found that in all cases there were no material instances of non-compliance and no material weakness in the internal control structures of the three subgrantees.⁽⁵⁰⁾

RECOMMENDATION

None.

B. Program Management: In the course of our review, we were provided with information regarding program costs. The figures were developed by WAP staff in order to assign costs to energy efficiency measures for the benefit-to-cost ratio and to allow managers to analyze program costs for the five subgrantees and their twelve field offices. Although we were not asked to perform a management review, we did discuss the cost figures with WAP staff.

FINDING

Administrative costs are well within DOE guidelines and indirect costs are justifiable, comparable to the private sector, and audited regularly.

Based on data provided by WAP staff,⁽⁵¹⁾ direct costs attributable to specific jobs totaled 59% and included installation crewmember salaries and benefits, and materials and supplies needed for the jobs. The combined administrative and indirect costs are approximately forty one percent (41%), including 12% for administration and 28% for indirect costs. While these figures seemed high at first, we were satisfied after further inquiries that it did not reflect inefficient administration of the program.

For example, DOE limits OEO to 5% for administration and the actual figure for 1997 was 3.2%. Subgrantee administrative costs are limited to 10% of their expenditures and they all stayed within the limit. Total 1997 administrative costs were 12.1% and DOE allows 15%.

This leaves approximately 28% for "indirect" costs which include client outreach and eligibility verification, vehicle maintenance and operation, space costs for staff offices, salaries and benefits for energy auditors, liability insurance, tools and equipment,

employee training, travel, and data collection and reporting. Although perhaps characterized differently in the private sector, these expenses are common to any entity providing similar services. For example, in the for-profit sector, client outreach is comparable to advertising and marketing.

We requested comparable information about weatherization programs in other states. Unfortunately, except for DOE-defined administrative costs, there is no uniform data on indirect costs from other states. Nevertheless, DOE provided some comparative data which should be read with caution. Compared to some of our neighbors, Vermont does very well. For example, 1997 indirect costs (as reported by DOE) for Massachusetts and Connecticut were 40% and 36% respectively, while Vermont's was 23%.⁽⁵²⁾

Another approach is to compare WAP costs to those of similar businesses in the private sector. The WAP staff obtained information about a comparably sized remodeling company in Maryland which reported spending approximately 25% of its revenues on overhead.⁽⁵³⁾ To make an objective comparison to the for-profit private sector, however, it's necessary to add a 35% gross profit margin to the state's cost figures. In calculating overhead, a for-profit entity would include gross profit as part of its total costs. With this added component, the WAP's "overhead" (indirect costs) would equal 30% of total expenditures, which is close to the private sector percentage noted in the example above.

The only indirect cost that may be high in comparison to the private sector is the cost of maintaining five regional subgrantees with twelve local offices. For a market the size of Vermont, a private company could probably operate with fewer offices and reduce its overhead proportionately. But the current WAP organizational structure reflects a desire to utilize a network of existing local service providers that offer decentralized community-based services.

RECOMMENDATION

None.

Footnotes

¹ "Impact Evaluation of the 1992-93 Weatherization Assistance Program," Vermont Energy Investment Corporation (VEIC), Dec. 30, 1993, pp.3 - 6.

² "Weatherization Works," The Annual Report of Vermont's Weatherization Program, Feb. 1996, p. 17.

³ Draft 1998 WAP Annual Report.

⁴ Jan. 13, 1997 telephone conversation with Jules Junker, Weatherization Program Coordinator.

⁵ "Monitoring & Evaluation Project: VT Low Income WAP," Center for Rural Studies (CRS), Jan. 1992, p. 30.

⁶ op cit., VEIC 1993 report, p. 25.

⁷ "Impact Evaluation of the 1993-94 Weatherization Assistance Program," (VEIC), Dec. 22, 1995, p.14.

⁸ "An Impact Evaluation of Vermont's Weatherization Assistance Program," TecMRKT, Dec., 1997, p.10.

⁹ op cit., CRS, p. 28.

¹⁰ op cit., VEIC, 1993, p.25.

¹¹ op cit., VEIC, 1995, p. 14.

¹² op cit., TecMRKT report, p. 9.

¹³ op cit., VEIC, 1993, pp.48-50; benefits include primarily air quality improvements from reduced fuel use.

¹⁴ op cit., VEIC, 1993, p.48.

¹⁵ op cit., VEIC, 1995, p. 18.

¹⁶ op cit., TecMRKT report, p. 21 - 22.

¹⁷ TecMRKT was not asked to quantify externalities benefits for this evaluation since the WAP chose to focus on health and safety benefits..

¹⁸ op cit., VEIC, 1993, p. 2.

¹⁹ op cit., VEIC, 1995, p. 2.

²⁰ op cit., TecMRKT report, p. 21 - 22.

²¹ op cit., VEIC, 1993, p. 42.

²² op cit., VEIC, 1993, p. 42.

²³ "Evaluation Methods to Quantify Non-Energy Impacts of Vermont's WAP, TecMRKT, Dec. 15, 1997

²⁴ Jan. 6, 1998 telephone conversation with Jules Junker, WAP Programs Coordinator.

²⁵ op cit., Evaluation Methods, TecMRKT, Dec. 1997.

²⁶ Dec. 29, 1997 Memorandum re: Leveraged Funds from Jules Junker, WAP Programs Coordinator.

²⁷ Jan. 6 and Jan. 13, 1998 telephone conversation with Richard Moffi, Fuel Assistance Program Director.

²⁸ op cit., Dec. 29, 1997 Memo. re: Leveraged Funds from Jules Junker.

²⁹ op cit., Dec. 29, 1997 Memo. re: Leveraged Funds from Jules Junker.

³⁰ Jan. 6, 1998 telephone conversation with Richard Moffi, Fuel Assistance Program Director.

³¹ Dec. 29, 1997 Memorandum re: Links with DSW from Jules Junker, WAP Programs Coordinator.

³² *ibid.*

³³ "Weatherization Effectiveness Study," Gratiot Engineering Company, Feb. 11, 1985, p. 28.

³⁴ "A Performance Assessment of the Vermont Low-Income Weatherization Program," Synertech, Jan. 1990, p. 8-4. Study limitations included anecdotal fuel consumption data and no control group.

³⁵ op cit., Synertech, Jan. 1990, p. 10-11.

³⁶ op cit., CRS, p. 41.

³⁷ Synertech, CRS, VEIC, and TecMRKT have all commented on this problem in their reports.

³⁸ State Auditor's Review of FISCAL YEAR 97 Performance Measurement Reporting, April 1, 1996, p. 18.

³⁹ *ibid*, p. 31.

⁴⁰ OEO draft (307(c) PM report, 12/5/97.

⁴¹ OEO FISCAL YEAR 98 Budget, Form 4, Section 1.

⁴² "Concept Statement #2,ö Governmental Accounting Standards Board, April, 1994.

⁴³ Nov. 25, 1997 letter from the Region I DOE Director Hugh Saussy to OEO Director David Tucker re. Annual Grantee Monitoring Review.

⁴⁴ Nov. 25, 1997 letter from the Region I DOE Director Hugh Saussy to OEO Director David Tucker re. Annual On-Site Administrative and Technical Monitoring Review of OEO's Subgrantee Reviews.

⁴⁵ KPMG Peat Marwick internal work papers.

⁴⁶ State Auditor's office (SAO), internal work papers.

⁴⁷ *ibid.*, SAO work papers.

⁴⁸ *op cit.*, SAO work papers.

⁴⁹ July 23, 1997 letter from Rocky Martin, OEO / WAP Weatherization Technician, to Gerard Miller, Weatherization Director of BROCC.

⁵⁰ Audit reports for Central Vermont Community Action Council (April 23, 1997, Sullivan, Powers & Co.), Champlain Valley Office of Economic Opportunity (April 25, 1997, Birnholz & Pelcher Accounting), and Southeastern Vermont Community Action (Nov. 22, 1996, A.M. Peisch & Co.).

⁵¹ Dec. 29, 1997 Memorandum re: Fixed vs. Variable Costs, from David Tucker, OEO Director & Jules Junker

⁵² Jan. 8, 1998 Telephone message from Jules Junker.

⁵³ Dec. 29, 1997 Memorandum re: Overhead Cost Comparison from Jules Junker, Weatherization Programs Coordinator.